

C L A I M S

1. A catalytic apparatus for exhaust purification that is provided in an exhaust path of an internal-combustion engine operable with at least a theoretical
5 air-fuel ratio and a lean air-fuel ratio, comprising:

exhaust purification means provided in the exhaust path and adapted to absorb NOx when an air-fuel ratio of incoming exhaust gas is a lean air-fuel ratio and to release or reduce the absorbed NOx when an
10 oxygen concentration of the incoming exhaust gas lowers; and

a three-way catalyst provided in the exhaust path and located on an upper-stream side of said exhaust purification means, said three-way catalyst having an
15 inner layer thereof containing at least rhodium as a noble metal and a surface layer thereof containing platinum or palladium as a noble metal, said three-way catalyst being loaded with a very small quantity of or no ceria.

20 3. A catalytic apparatus for exhaust purification according to claim 1, wherein the noble metal in said inner layer of said three-way catalyst mainly consists of rhodium alone or both rhodium and platinum.

25 4. A catalytic apparatus for exhaust purification according to claim 1, wherein the noble metal in said surface layer of said three-way catalyst mainly consists of platinum or palladium.

30 6. A catalytic apparatus for exhaust purification according to claim 3, wherein the noble metal in said inner layer mainly contains rhodium alone, and a rhodium content of said inner layer is set within a range from 0.05 to 5.0 g/l of catalyst volume.

7. A catalytic apparatus for exhaust purification

according to claim 3, wherein the noble metal in said inner layer mainly contains rhodium alone, and the rhodium content of said inner layer is set within the range from 0.3 to 0.6 g/l of catalyst volume.

5 8. A catalytic apparatus for exhaust purification according to claim 4, wherein the noble metal in said inner layer mainly contains rhodium alone, and a rhodium content of said inner layer is set within a range from 0.05 to 5.0 g/l of catalyst volume.

10 9. A catalytic apparatus for exhaust purification according to claim 4, wherein the noble metal in said inner layer mainly contains rhodium alone, and a rhodium content of said inner layer is set within a range from 0.3 to 0.6 g/l of catalyst volume.

15 10. A catalytic apparatus for exhaust purification according to claim 4, wherein the noble metal in said surface layer mainly contains platinum, and a platinum content of said surface layer is set within a range from 0.05 to 20.0 g/l of catalyst volume.

20 11. A catalytic apparatus for exhaust purification according to claim 4, wherein the noble metal in said surface layer mainly contains platinum, and a platinum content of said surface layer is set within a range from 1.5 to 3.0 g/l of catalyst volume.